

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for monitoring computer software comprising:
receiving an assertion from an executing process, wherein receiving an assertion comprises:
receiving an assertion request;
performing at least one of:
recognizing an assertion request type corresponding to the assertion request; and
determining a component that sourced the assertion request; and
accepting the assertion request for at least one of:
an assertion request of an enabled recognized assertion request type; and
an assertion request of a determined component which has assertion requests
enabled;
recording the assertion when [[it]] the assertion is violated; and
allowing the executing process to continue execution.
- 2-3. (Cancelled)
4. (Original) The method of Claim 1 wherein recording the assertion comprises
recording a datum that includes at least one of:
type of assertion,
sequence number of the assertion,

time at which the assertion occurred,
identification of processor that produced the assertion,
identification of process that produced the assertion,
identification of the thread that produced the assertion,
text of the assertion,
stack trace,
source line containing the assertion, and
file name of the source containing the code that generated the assertion.

5. (Original) The method of Claim 1 wherein recording the assertion comprises writing information regarding the assertion violation to a computer readable medium.

6. (Original) The method of Claim 1 wherein recording the assertion comprises writing information regarding the assertion violation to a circular buffer.

7. (Original) The method of Claim 1 further comprising:
accepting a command from at least one of a control console and a network connection; and
updating an enable condition for an assertion class according to the command.

8. (Original) The method of Claim 1 further comprising generating an error report according to the recorded assertion.

9. (Original) The method of Claim 8 further comprising dispatching the error report to a real-time assertion monitor.

10. (Original) The method of Claim 8 wherein generating an error report comprises:
retrieving an assertion violation parameter including at least one of:

type of assertion,

sequence number of the assertion,
time at which the assertion occurred,
identification of processor that produced the assertion,
identification of process that produced the assertion,
identification of the thread that produced the assertion,
text of the assertion,
stack trace,
source line containing the assertion, and
file name of the source containing the code that generated the assertion; and
generating a report file comprising page description statements according to the assertion parameter.

11. (Currently amended) An apparatus for monitoring computer software comprising:

a memory comprising:

an assertion receiver ~~that receives~~ arranged to receive an assertion from an executing process,
wherein the assertion receiver comprises:

an assertion request receiver arranged to receive an assertion request; and

an assertion accept determination unit arranged to recognize an assertion type and
generate an accept assertion signal for at least one of:

an enabled recognized assertion type; and

an enabled determined component; and

an assertion recorder ~~that records~~ arranged to record the assertion when [[it]] the assertion is violated.

12-13. (Cancelled)

14. (Original) The apparatus of Claim 11 wherein the assertion recorder is capable of recording a datum that includes at least one of:

type of assertion,

sequence number of the assertion,

time at which the assertion occurred,

identification of processor that produced the assertion,

identification of process that produced the assertion,

identification of the thread that produced the assertion,

text of the assertion,

stack trace,

source line containing the assertion, and

file name of the source containing the code that generated the assertion.

15. (Currently amended) The apparatus of Claim 11 wherein the assertion recorder comprises:

an information interface ~~that receives~~ arranged to receive assertion violation data; and

a media controller ~~that conveys~~ arranged to convey the assertion violation data to a computer readable medium.

16. (Currently amended) The apparatus of Claim 11 wherein the assertion recorder comprises:

an information interface ~~that receives~~ arranged to receive assertion violation data; and

a buffer manager ~~that conveys~~ arranged to convey the assertion violation data to a circular buffer.

17. (Currently amended) The apparatus of Claim 11 further comprising:

a command receiver ~~capable of accepting~~ arranged to accept a command from at least one of a control console and a network connection; and

an assertion manager ~~capable of updating~~ arranged to update an enable condition for an assertion class according to the command.

18. (Currently amended) The apparatus of Claim 11 further comprising an error report generator ~~capable of generating~~ arranged to generate an error report according to the recorded assertion.

19. (Currently amended) The apparatus of Claim 18 further comprising a dispatch unit ~~capable of dispatching~~ arranged to dispatch an error report to a real-time assertion monitor.

20. (Currently amended) The apparatus of Claim 18 wherein the error report generator comprises:

a data retrieval unit that retrieves an assertion violation parameter including at least one of:

type of assertion,

sequence number of the assertion,

time at which the assertion occurred,

identification of processor that produced the assertion,

identification of process that produced the assertion,

identification of the thread that produced the assertion,

text of the assertion,

stack trace,

source line containing the assertion, and

file name of the source containing the code that generated the assertion; and
a report file generator capable of generating arranged to generate a report file comprising page description statements according to the assertion parameter.

21. (Currently amended) A computer software monitoring system comprising:

memory capable of storing instructions;

processor capable of executing instructions stored in the memory; and

software monitor instruction sequence that, when executed by the processor, minimally causes the processor to:

receive an assertion from an executing process, wherein the software monitor instruction sequence comprises an assertion receiver instruction sequence that, when executed by the processor, minimally causes the processor to receive an assertion by minimally causing the processor to:

receive an assertion request;

perform at least one of:

recognize a type for the assertion request; and

determine a component that sourced the assertion request; and

accept the assertion request for at least one of:

an enabled recognized assertion request type; and

an enabled determined component,

record the assertion, and

allow the executing process to continue execution.

22-23. (Cancelled)

24. (Original) The computer software monitoring system of Claim 21 wherein the software monitor instruction sequence comprises an assertion recorder instruction sequence that, when executed by the processor, minimally causes the processor to record an assertion by minimally causing the processor to record a datum that includes at least one of:

- type of assertion,
- sequence number of the assertion,
- time at which the assertion occurred,
- identification of processor that produced the assertion,
- identification of process that produced the assertion,
- identification of the thread that produced the assertion,
- text of the assertion,
- stack trace,
- source line containing the assertion, and
- file name of the source containing the code that generated the assertion.

25. (Original) The computer software monitoring system of Claim 21 wherein the software monitor instruction sequence comprises an assertion recorder instruction sequence that, when executed by the processor, minimally causes the processor to record an assertion by minimally causing the processor to write information regarding the assertion to a computer readable medium.

26. (Original) The computer software monitoring system of Claim 21 wherein the software monitor instruction sequence comprises an assertion recorder instruction sequence that, when executed by the processor, minimally causes the processor to record an assertion by

minimally causing the processor to write information regarding the assertion to a circular buffer.

27. (Original) The computer software monitoring system of Claim 21 wherein the software monitor instruction sequence further minimally causes the processor to:

accept a command from at least one of a control console and a network connection; and

update an enable condition for an assertion class according to the command.

28. (Original) The computer software monitoring system of Claim 21 wherein the software monitor instruction sequence further minimally causes the processor to generate an error report according to the recorded assertion.

29. (Original) The computer software monitoring system of Claim 28 wherein the software monitor instruction sequence further minimally causes the processor to dispatch the error report to a real-time assertion monitor.

30. (Original) The computer software monitoring system of Claim 28 wherein the software monitor instruction sequence comprises an error report generator instruction sequence that, when executed by the processor, minimally causes the processor to generate an error report by minimally causing the processor to:

retrieve an assertion violation parameter including at least one of:

type of assertion,

sequence number of the assertion,

time at which the assertion occurred,

identification of processor that produced the assertion,

identification of process that produced the assertion,

identification of the thread that produced the assertion,

text of the assertion,

stack trace,

source line containing the assertion, and

file name of the source containing the code that generated the assertion; and

generate a report file comprising page description statements according to the assertion parameter.

31. (Currently amended) A computer-readable medium having computer-executable instructions for performing a method for monitoring computer software, the instructions comprising modules for:

receiving an assertion from an executing process, wherein the receiving an assertion module comprises modules for:

receiving an assertion request;

performing at least one of:

recognizing an assertion request type corresponding to the assertion request; and

determining a component that sourced the assertion request; and

accepting the assertion request for at least one of:

an assertion request of an enabled recognized assertion request type; and

an assertion request of a determined component which has assertion requests

enabled;

recording the assertion; and

allowing the executing process to continue execution.

32-33. (Cancelled)

34. (Original) The computer-readable medium of Claim 31 wherein the recording the assertion module comprises a module for recording a datum that includes at least one of:

type of assertion,

sequence number of the assertion,

time at which the assertion occurred,

identification of processor that produced the assertion,

identification of process that produced the assertion,

identification of the thread that produced the assertion,

text of the assertion,

stack trace,

source line containing the assertion, and

file name of the source containing the code that generated the assertion.

35. (Original) The computer-readable medium of Claim 31 wherein the recording the assertion module comprises a module for writing information regarding the assertion to a computer readable medium.

36. (Original) The computer-readable medium of Claim 31 wherein the recording the assertion module comprises a module for writing information regarding the assertion to a circular buffer.

37. (Original) The computer-readable medium of Claim 31, the instructions further comprising modules for:

accepting a command from at least one of a control console and a network connection; and

updating an enable condition for an assertion class according to the command.

38. (Original) The computer-readable medium of Claim 31, the instructions further comprising a module for generating an error report according to the recorded assertion.

39. (Original) The computer-readable medium of Claim 38, the instructions further comprising a module for dispatching the error report to a real-time assertion monitor.

40. (Original) The computer-readable medium of Claim 38 wherein dispatching the error report module comprises modules for:

retrieving an assertion violation parameter including at least one of:

type of assertion,

sequence number of the assertion,

time at which the assertion occurred,

identification of processor that produced the assertion,

identification of process that produced the assertion,

identification of the thread that produced the assertion,

text of the assertion,

stack trace,

source line containing the assertion, and

file name of the source containing the code that generated the assertion; and

generating a report file comprising page description statements according to the assertion parameter.

41. (Currently amended) An apparatus for monitoring computer software comprising:
means for detecting an assertion from an executing process, wherein the means for detecting comprises:

means for ascertaining at least one of:

a type of an assertion request; and

a component that sourced an assertion request; and

means for ignoring the assertion request for at least one of:

a non-enabled ascertained assertion request type; and

a non-enabled ascertained component;

means for recording information pertaining to the assertion when it is violated; and

means for allowing the executing process to continue execution.

42-43. (Cancelled)

44. (New) The method of Claim 2 wherein the assertion request type is one of a group of defined assertion macro names.

45. (New) The apparatus of Claim 11 wherein the assertion type is one of a group of defined assertion macro names.

46. (New) The computer software monitoring system of Claim 21 wherein the assertion request type is one of a group of defined assertion macro names.

47. (New) The computer-readable medium of Claim 31 wherein the assertion request type is one of a group of defined assertion macro names.

48. (New) The apparatus for monitoring computer software of Claim 41 wherein the assertion request type is one of a group of defined assertion macro names.

49. (New) A method for monitoring computer software comprising:

receiving an assertion from an executing process, wherein the executing process is integral to an operating system;

recording the assertion when the assertion is violated; and
allowing the executing process to continue execution.